IN THE CLAIMS

Please amend the claims as follows:

Claims 1-3 (Canceled).

Claim 4 (Currently Amended): A video signal coding method comprising the steps of:

determining a coding difficulty level d of an input video signal for each unit of time; measuring visual characteristics of the input video signal;

determining a reference value for allocating coding bits on the basis of temporally b(d) for the amount of coding bits b allocated for each unit of time and related in advance to the coding difficulty level d of said input video signal for each unit of time;

determining an actual amount of allocated coding bits b_x on the basis of the reference value; and

generating coded data by coding the input video signal for each unit of time on the basis of said actual amount of allocated coding bits b_x, wherein part of the sum B_av of the amounts of allocated bits b_av per unit time for a certain period of time T_vbr, or

$$B_av = b_av T_vbr$$
 $B_av = b_av \times T_vbr$,

is stored as virtual buffer V_vbr in advance and the actual reference value of the amount of allocated coding bits b_real is obtained by

$$b_real = (B_av - V_vbr) / T_vbr$$

so that an amount of allocated bits not smaller than b_real is given as long as V_vbr > 0 but an amount smaller than b_real is given otherwise in said step of determining the actual amount of allocated coding bits on the basis of said reference value.



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Claim 5 (Original): The video signal coding method according to claim 4, wherein an upper limit is provided in advance according to the amount of allocated bits b_av when giving an amount of allocated bits exceeding said b_real.

Claim 6 (Original): The video signal coding method according to claim 4, wherein a lower limit is provided in advance according to the amount of allocated bits b_av when giving an amount of allocated bits smaller than said b_real.

Claim 7 (Original): The video signal coding method according to claim 4, wherein the upper limit is provided according to a proportion of scenes that are conspicuously degraded as a result of coding by taking the visual characteristics of the input image into consideration when giving an amount of allocated bits smaller than said b_real.

Claim 8 (Original): The video signal coding method according to claim 4, wherein, when the difference between the sum of the amounts of actually generated bits B_gen in the period of time and the sum of the amounts of available bits B_av in the period of time (B_av - B_gen) is positive when the coding operation in said period of time T_vbr is over, the difference is carried over and added to the sum of the amounts of available bits in the next period of time.

Claim 9 (Original): The video signal coding method according to claim 4, wherein, when the sum of the amounts of available bits exceeds R_total times of the initial sum B_av as a result of carrying over the difference, the reference value of the actually allocated bits per unit time b_real is raised according to the ratio.

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Claims 10-11 (Canceled).

Claim 12 ((Previously Presented): A video signal encoder comprising:

a means for determining a coding difficulty level d of an input video signal for each unit of time;

a means for measuring visual characteristics of the input video signal;

a means for determining a reference value for allocating coding bits on the basis of temporally b(d) for the amount of coding bits b allocated for each unit of time and related in advance to the coding difficulty level d of said input video signal for each unit of time;

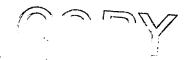
a means for determining an actual amount of allocated coding bits b_x on the basis of the reference value; and

a means for generating coded data by coding the input video signal for each unit of time on the basis of said actual amount of allocated coding bits b_x, wherein said means for determining the actual amount coding bits on the basis of the reference value controls the actual amount of allocated bits in such a way that the sum of the generated bits obtained when coding the input video signal for a certain period of time T_vbr does not exceed the amount of bits available for recording a signal having the length of the period of time T_vbr on a recording medium.

Claim 13 (Currently Amended): A video signal encoder comprising:

a means for determining a coding difficulty level d of an input video signal for each unit of time;

a means for measuring visual characteristics of the input video signal;



a means for determining a reference value for allocating coding bits on the basis of temporally b(d) for the amount of coding bits b allocated for each unit of time and related in advance to the coding difficulty level d of said input video signal for each unit of time;

a means for determining an actual amount of allocated coding bits b_x on the basis of the reference value; and

a means for generating coded data by coding the input video signal for each unit of time on the basis of said actual amount of allocated coding bits b_x, wherein part of the sum B_av of the amounts of allocated bits b_av per unit time for a certain period of time T_vbr, or

$$B_av = b_av T_vbr$$
 $B_av = b_av \times T_vbr$,

is stored as virtual buffer V_vbr in advance and the actual reference value of the amount of allocated coding bits b_real is obtained by

$$b real = (B av - V vbr) / T vbr$$

so that an amount of allocated bits not smaller than b_real is given as long as V_vbr > 0 but an amount smaller than b_real is given otherwise in said step of determining the actual amount of allocated coding bits on the basis of said reference value.

Claim 14 (Original): The video signal encoder according to claim 13, wherein an upper limit is provided in advance according to the amount of allocated bits b_av when giving an amount of allocated bits exceeding said b_real.

Claim 15 (Original): The video signal encoder according to claim 13, wherein a lower limit is provided in advance according to the amount of allocated bits b_av when giving an amount of allocated bits smaller than said b_real.



Claim 16 (Original): The video signal encoder according to claim 13, wherein the lower limit is determined as according to a proportion of scenes that are conspicuously degraded as a result of coding by taking the visual characteristics of the input image into consideration when giving an amount of allocated bits smaller than said b_real.

Claim 17 (Original): The video signal encoder according to claim 13, wherein, when the difference between the sum of the amounts of actually generated bits B_gen in the period of time and the sum of the amounts of available bits B_av in the period of time (B_av - B_gen) is positive when the coding operation in said period of time T_vbr is over, the difference is carried over and added to the sum of the amounts of available bits in the next period of time.

Claim 18 (Original): The video signal encoder according to claim 13, wherein, when the sum of the amounts of available bits exceeds R_total times of the initial sum B_av as a result of carrying over the difference, the reference value of the actually allocated bits per unit time b_real is raised according to the ratio.

Claim 19 (Previously Presented): A video signal coding method comprising the steps of:

utilizing a virtual buffer;

allocating an amount of information greater than b_real to an image showing a relatively high coding difficulty level, where b_real is obtained by

b real =
$$(B \text{ av}) \times (R \text{ vbr})$$
; and

controlling a bit rate based on an amount of residue, where the amount of residual is obtained by

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wherein an amount of information smaller than b_real is allocated to an image showing a relatively low coding difficulty level.

